A SEMICONDUCTOR DEVICE WITH SHIELDING

ABSTRACT OF THE DISCLOSURE

A semiconductor device includes grooves formed in a semiconductor substrate to provide an inner portion movable in x and y directions. Drive electrodes vibrate the inner portion in the x direction, and detection electrodes detect movement in the y direction generated when an angular velocity is applied thereto. Monitor electrodes generate monitor signals for monitoring movement of the inner portion in the x direction. Shield wires are provided between the drive and detection electrodes and the monitor electrodes to suppress capacitive coupling. D ummy electrodes adjacent to the output electrodes and capacitively coupled to the drive electrodes generate a dummy signal. D ummy signal wires are respectively connected to the dummy electrodes and to the circuit substrate. The dummy signal includes an induced component of a periodical signal and is supplied to the circuit substrate to cancel another induced component of the periodical signal in the drive and monitor signals.